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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/728,535	12/01/2000	Jae Chang Jung	000939-078800US	5110

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EXAMINER
HAMILTON, CYNTHIA

ART UNIT	PAPER NUMBER
1752	

DATE MAILED: 05/01/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

MF-6

Office Action Summary	Application No. 09/728,535	Applicant(s) JUNG ET AL.	
	Examiner Cynthia Hamilton	Art Unit 1752	

-- The MAILING DATE of this communication appears on th cover sheet with the correspondenc addr ss --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

GH 4-29-02

1)☒ Responsive to communication(s) filed on *12/01/00, 04/22/02* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-20* is/are pending in the application.

4a) Of the above claim(s) *14-20* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☒ Claim(s) *1-20* are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☒ All b)☐ Some * c)☐ None of:

1.☒ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *1* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

1. Applicant's election with traverse of Group I in Paper No. 5 is acknowledged. The traversal is on the ground(s) that the proper search for Group I and II are so closely related that a proper search of Group I "of necessity" requires a search of Group II. Applicants further state that a thorough search for the compositions of Group I requires a search to determine if they have been previously made or used. This is not found persuasive because of the reasons given in the restriction in the previous Office Action. The search for the composition if it does not yield prior art directed to unobviousness or anticipation would lead to Group II search as set forth by office procedure. However, the search for the composition alone does not require a search for all possible uses of that composition. The examiner notes for the record that Group III should be claim 20 instead of claim 18. If the search for the composition yields issues of anticipation and/or unobviousness then the search for the intended use is not required to stop allowance of the claims at issue.

The requirement is still deemed proper and is therefore made FINAL.

2. Claims 14-20 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim. Applicant timely traversed the restriction (election) requirement in Paper No. 5.

3. The following is a quotation of the first paragraph of 35 U.S.C. 112:

> The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 6-11 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 6, is found "said basic compound is selected from the group consisting of ...; derivatives and salts thereof; ...". It is not clear what basic compound derivatives and salts are referenced here. What is derived from what? Are non basic compounds now included as long as they are derivatives of basic compounds? Are these derivatives or salts of amines, amides and urethanes? The examiner is not sure what is part of these two groups. Thus, claims 6-11 are indefinite.

6. Claims 7-8 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. In claim 7, R_1, R_2 and R_3 are independently H or C_1 - C_{20} alkyl. The standard meaning for alkyl in the art is $C_n H_{2n+1}$ - or a monovalent radical derived from an aliphatic hydrocarbon by removal of 1 H; as, methyl-. See Grant et al for definition. However, in claim 8, the alkyl is defined as including unsubstituted alkyl and hydroxylalkyl, alkyl carboxylic acid, aminoalkyl, alkylketone and alkylester groups. Thus, because applicants clearly mean more by alkyl than that recognized by workers of ordinary skill in the art, no definition as to its meaning leaves unclear what is encompassed by the term "alkyl". Thus, claims 7-8 are found indefinite.

7. Claim11 is rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention. Triethanolamine is defined as a tri(hydroxyalkyl) ammonium salt when it has no counter ion to be a salt. It is an amine and not a salt of an amine. Thus, what is meant by salt is unclear here.

8. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (a) the invention was known or used by others in this country, or patented or described in a printed publication in this or a foreign country, before the invention thereof by the applicant for a patent.
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in-
> (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effect under this subsection of a national application published under section 122(b) only if the international application designating the United States was published under Article 21(2)(a) of such treaty in the English language; or
> (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

9. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

10. Claims 1-2, 4-10, 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Brunsvold et al (5,744,537). The composition of Example 3 of Brunsvold et al anticipates the compositions of instant claims 1-2, 4-13, wherein the aqueous solution of tetramethyl ammonium hydroxide pentahydrate and polyacrylic acid is inherently useful as an over-coating for photoresist compositions to provide a vertical photoresist pattern. In Brunsvold et al, see particularly Examples 1-3, col. 3, lines 23- col. 4, lines 17. The examiner notes that Brunsvold et al use ammonium salts and claim 7 defines an amine but claim 7 does not require that an amine be present nor does claim 8. The same is true of claim 11 and triethanolamine.

11. Claims 1-2, 4-8 and 12-13 are rejected under 35 U.S.C. 102(e) as being anticipated by Tanabe et al (6,132,928). The coating composition of Examples 1-2 comprised of polyacrylic acid (or polyvinyl pyrrolidone), water and the monoethanol amine of perfluoroocylsulfonic acid anticipates the instant coating layers and these compositions are inherently useful in the manner set forth for intended use by applicants in claims 1-2, 4-8 and 12-13. The use of any of the anionic ammonium salt surfactants of Tanabe et al with polyvinyl pyrrolidone or polyacrylic acid aqueous solutions as set forth in col. 3 and 4 of Tanabe et al would have anticipated applicant's invention in view of polyvinyl pyrrolidone and polyacrylic acid being listed as the particularly preferred film forming components. Their use with any of the given ammonium salts would have been immediately envisionable by the worker in the art in view of the Tanabe et al disclosure.

12. Claims 1-2, 4-8, 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Wakiya et al (5,783,362). The composition of Example 3 of Wakiya et al anticipates the instant compositions wherein n-octyl-2-pyrrolidone is the amide that is a basic compound as well as the monethanolamine of perfluorooctylsulfonic acid and polyvinylpyrrolidone is the resin and water is the solvent.

13. Claims 1-2, 4 -13 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wakiya et al (5,783,362). The aqueous liquid coating compositions of Wakiya et al wherein a water soluble, film forming polymer is mixed with a fluorosurfactant and an anionic surfactant teach all of the instant compositions of claims 1-2, 4-13 with the exception of specifically requiring that a basic compound be present. However, the fluorosurfactant is taught to be a salt for solubility reasons in col. 5 made from combining fluoro alkyl acids with alkanolmines inclusive

of triethanol amine. Thus, with respect to instant claims 1-2, and 4-13, the use of trimethanol amine salts in the compositions of Wakiya et al would have been prima facie obvious in view of their teachings that such salts were of use as the fluorosurfactant in their coatings.

14. Claims 1-2, 4-10, 12-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Nishi et al (5,611,850). Preparation Example 14 and preparation example 5 of Nishi et al anticipate the instant composition wherein the resin is either polyvinyl pyrrolidone or polyacrylic acid, the solvent is isopropanol/water and the basic compound is the tetarmethylammonium hydroxide salt of heptadecafluorooctanesulfonic acid.

15. Claims 1-2, 4-10, 12-13 are rejected under 35 U.S.C. 102(a) as being anticipated by Takano et al (EP 1 026 208 A1). The compositions of Takano et al as set forth in the Abstract anticipate the instant composition of claim 1 wherein the solvent is water as set forth in claim 1. Further, the choice of any one amine compound as set forth on fourth page lines 47-55 as the amine is held anticipatory as well since only the choice of which given amine is made. These choices are inclusive of triethanol amine and tetramethylammonium hydroxide as well as triethylamine.

16. Claims 1-2, 4-13 are rejected under 35 U.S.C. 102(b) as being anticipated by Jain et al (WO 95/10798). Examples 2-9 of Jain et al anticipate the instant compositions wherein amine salts are used as the basic compound and water as the solvent.

17. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Jung et al (Polymer) is too new to be prior art in this application but it addresses the use of poly acrylic acid/methyl acrylate overcoats with proline additives to set up an amine gradient in the cover layer of photoresists.

18. Claims 1 and 3 are rejected under 35 U.S.C. 102(b) as being anticipated by Tomihari et al (JP 02-263811 A). The composition wherein the component B is methyl acrylate anticipates the instant composition of claims 1 and 3 wherein the basic compound is the ammonia used to neutralize the copolymer. The solvent is water.

19. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cynthia Hamilton whose telephone number is (703) 308-3626. The examiner can normally be reached on Monday-Friday, 9:30 am to 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Janet Baxter can be reached on (703) 308-2303. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9310 for regular communications and (703) 872-9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703 305 0661.

Cynthia Hamilton
April 29, 2002

CYNTHIA HAMILTON
PRIMARY EXAMINER